

**ABSTRACT****DATA PROCESSING APPARATUS AND METHOD**

5 A system for watermarking and distributing material includes a data processing apparatus, which operates as a watermark encoder. The data processing apparatus is operable to process an original material item to form a reduced-bandwidth-version of the material item, marked with a code word from a predetermined set of code words. The data processing apparatus is operable to form an impaired version of the material item from which a marked representation of the original material item can be formed.

10 The impaired version is formed by subtracting the reduced-bandwidth-version of the material item from a copy of the original material item. As such, the impaired version can be mass distributed, but a representation of the original material item cannot be formed without the reduced-bandwidth-version of the material item. By watermarking the reduced-bandwidth-versions, a representation of the material item, formed by

15 combining one of the marked reduced-bandwidth-versions with the impaired material item, can be uniquely identified. However, only a low bandwidth part of the material item need be watermark encoded, which is more easily distributable to individual recipients than watermarked copies of the original material item.

20 [Fig 5]